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(54) **NAVIGATION SYSTEM WITH COMMUNICATION IDENTIFICATION BASED DESTINATION GUIDANCE MECHANISM AND METHOD OF OPERATION THEREOF**

(75) Inventor: **Ky Tang**, Milpitas, CA (US)

(73) Assignee: **TeleNav, Inc.**, Sunnyvale, CA (US)

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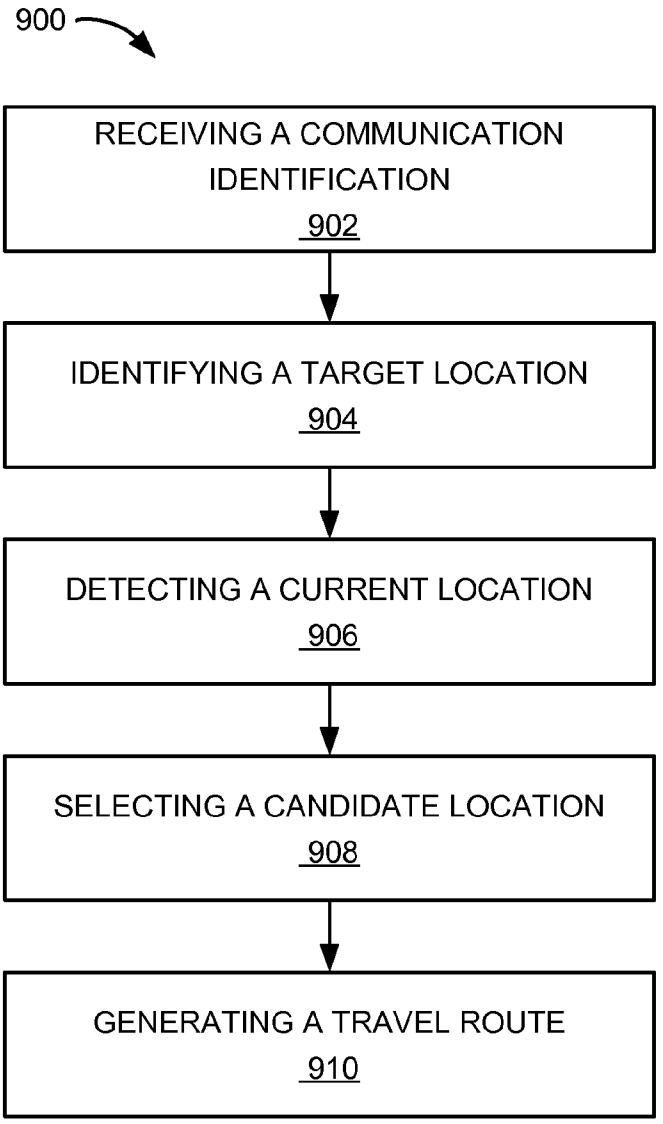
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(57) **ABSTRACT**

A method of operation of a navigation system includes: receiving a communication identification based on a communication; identifying a target location associated with the communication identification; detecting a current location associated with when the communication occurred for locating a device; selecting a candidate location based on the candidate location being closer to the current location than the target location where the candidate location is also associated with the communication identification; and generating a travel route to the candidate location for displaying on the device.



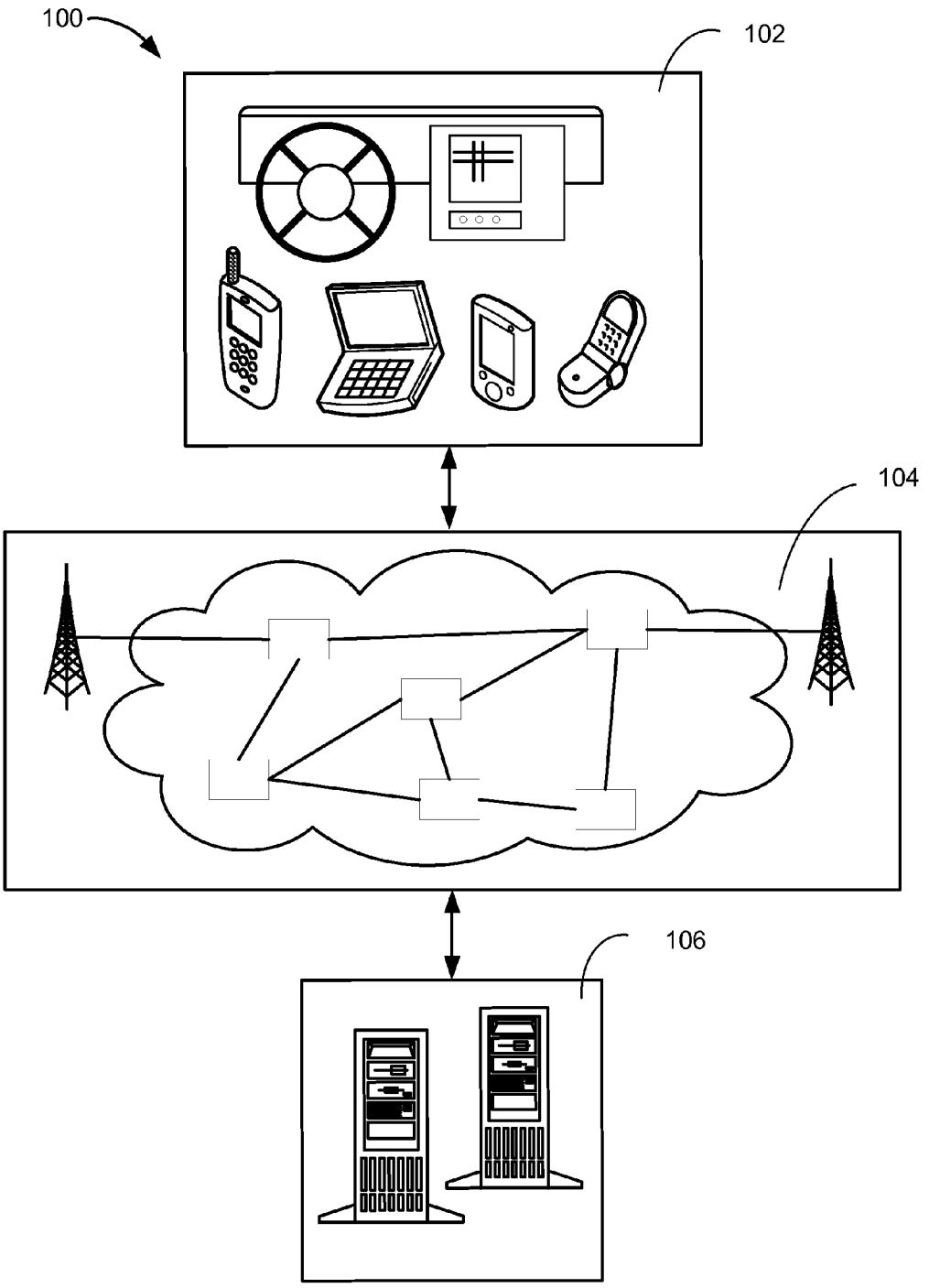


FIG. 1

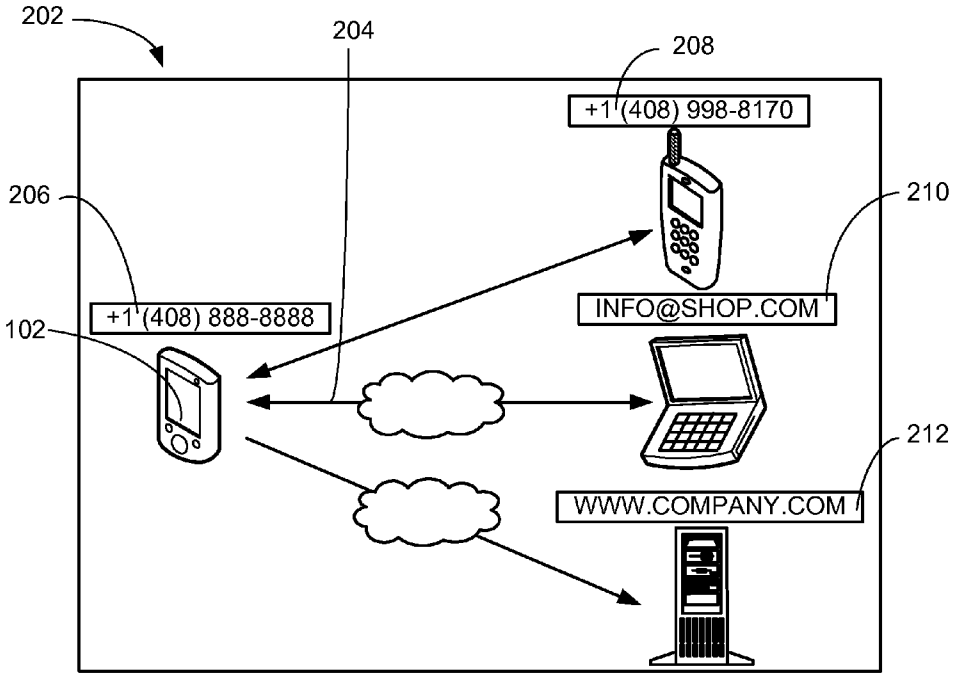

202
204
208
+1 (408) 998-8170
206
210
+1 (408) 888-8888
INFO@SHOP.COM
102
212
WWW.COMPANY.COM

FIG. 2

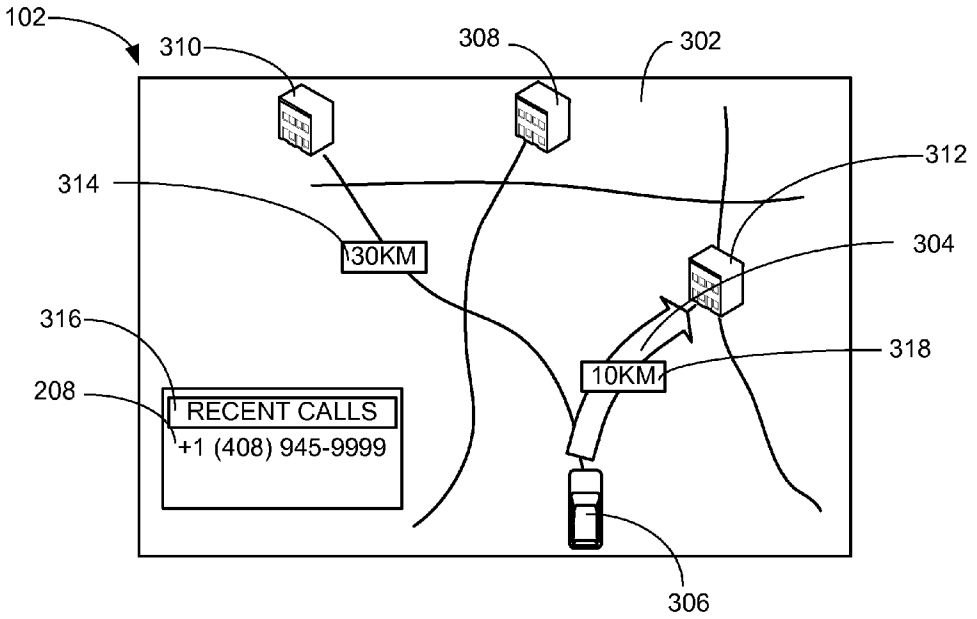

102
310
308
302
312
314
30KM
304
316
318
10KM
208
RECENT CALLS
+1 (408) 945-9999
306

FIG. 3

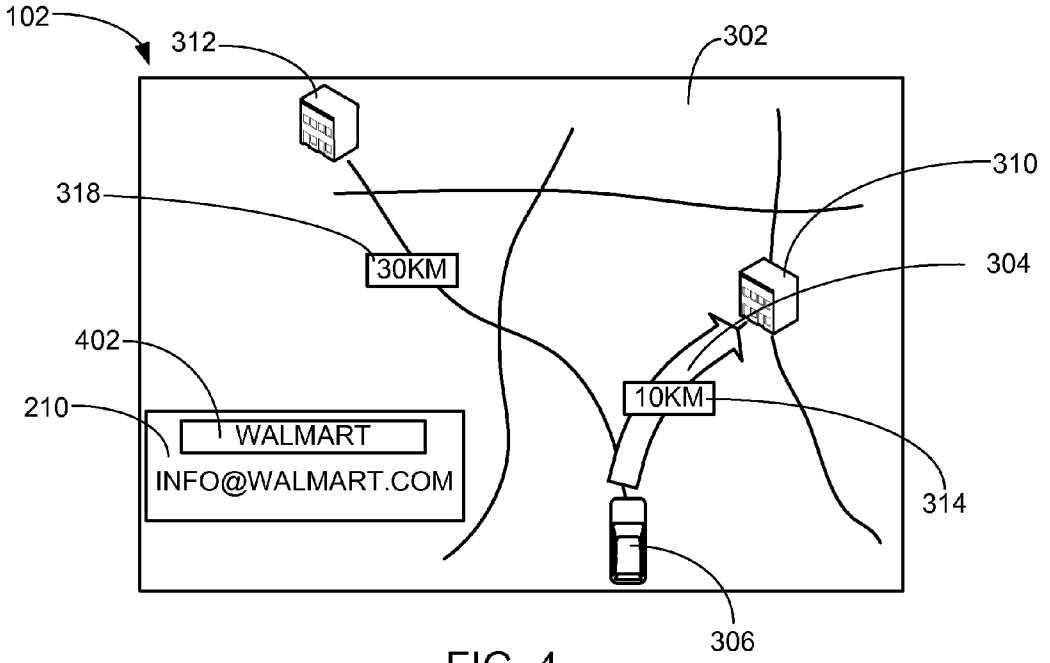

102
312
302
310
318
30KM
304
402
10KM
210
WALMART
INFO@WALMART.COM
314
306

FIG. 4

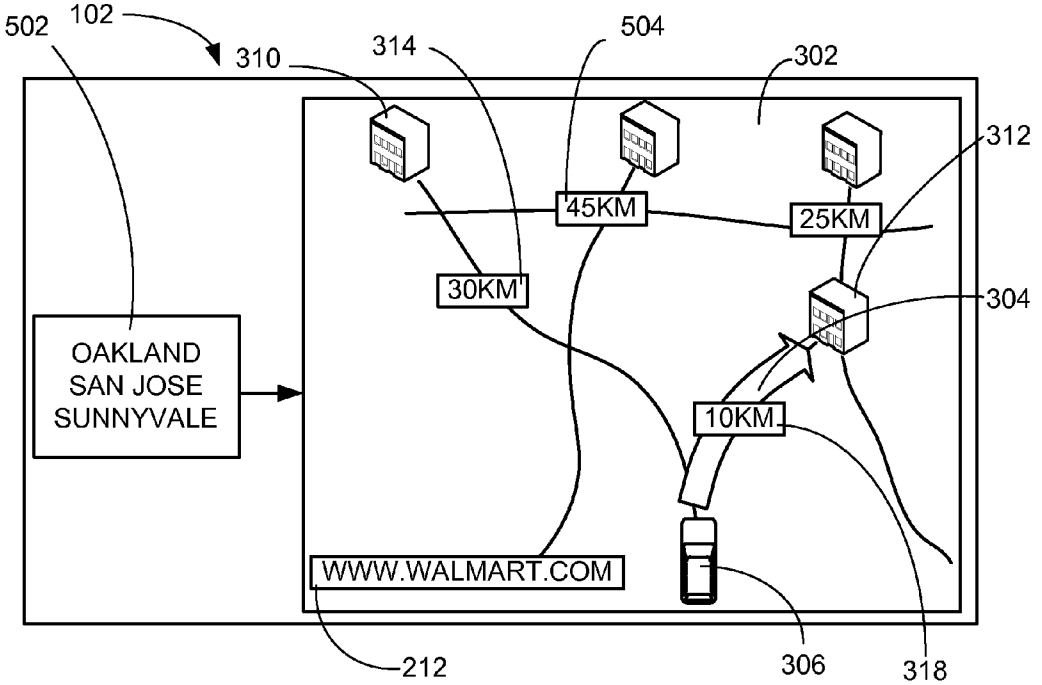

502
102
310
314
504
302
312
45KM
25KM
30KM
304
OAKLAND
SAN JOSE
SUNNYVALE
10KM
WWW.WALMART.COM
212
306
318

FIG. 5

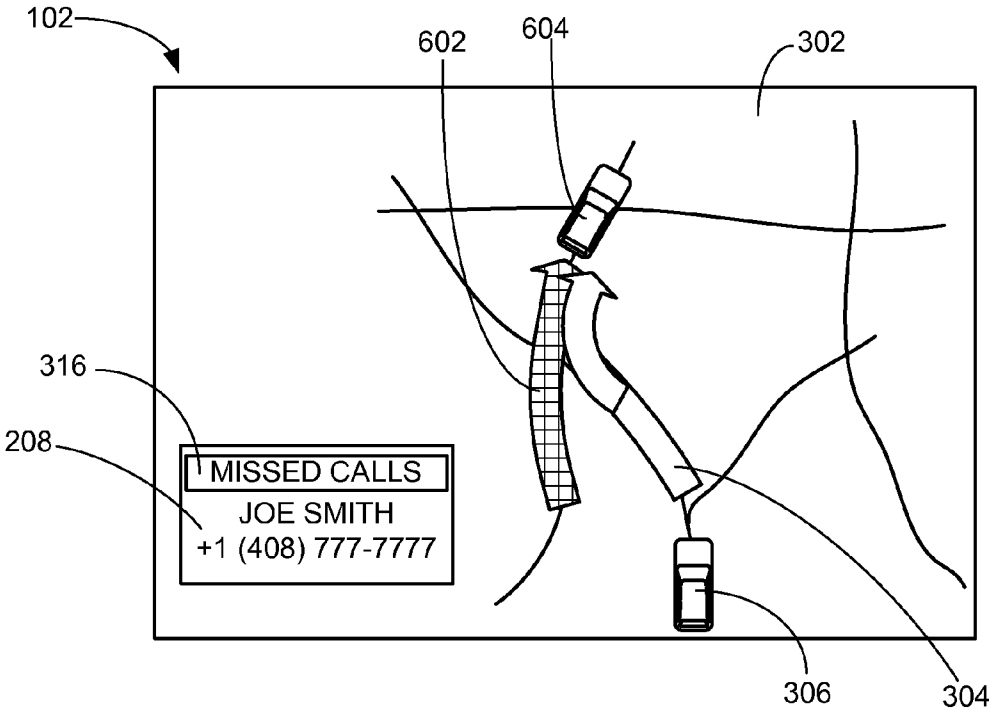

102
602
604
302
316
208
MISSED CALLS
JOE SMITH
+1 (408) 777-7777
306
304

FIG. 6

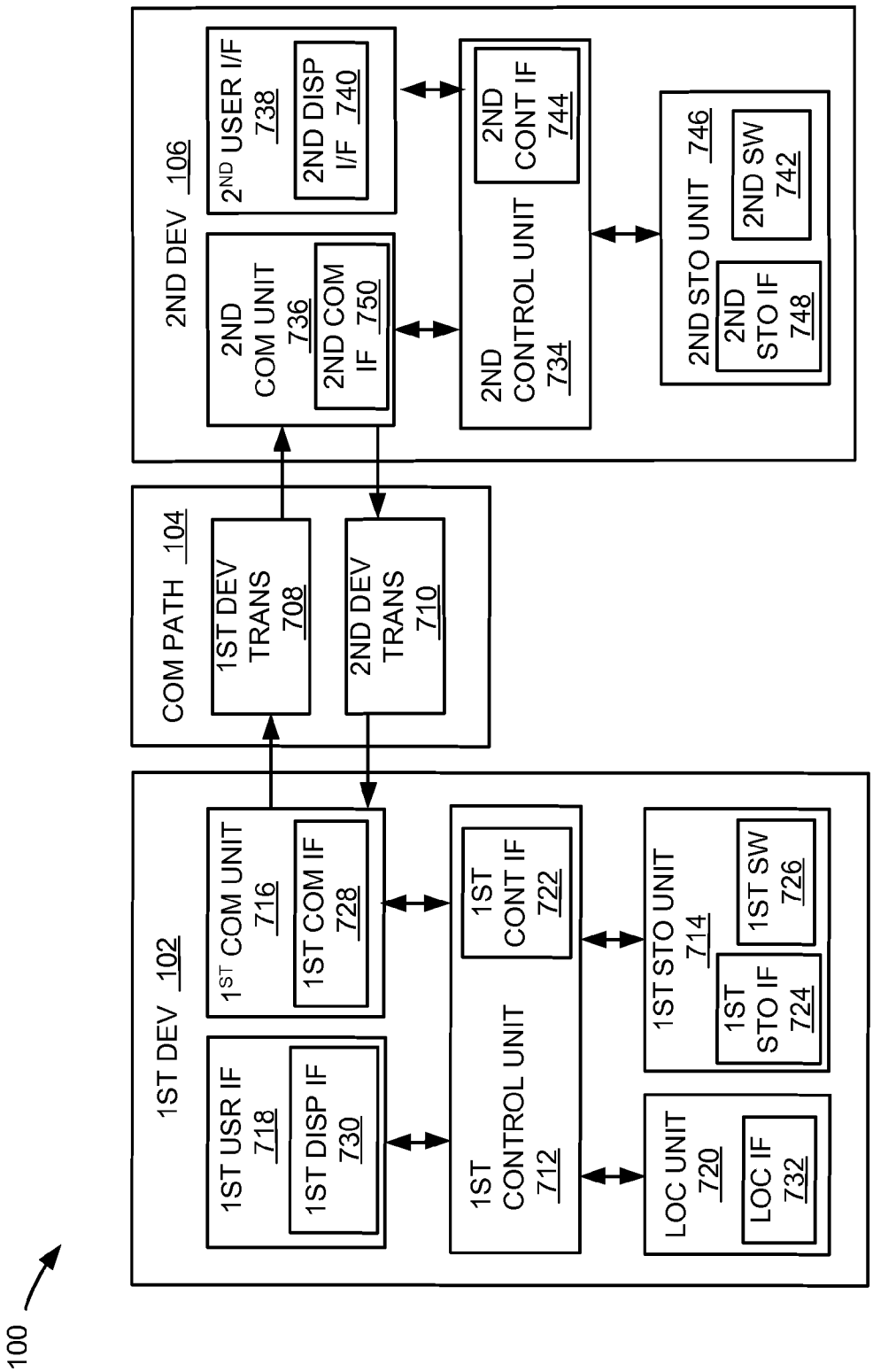

100
1ST DEV 102
1ST USR IF 718
1ST DISP IF 730
1ST COM UNIT 716
1ST COM IF 728
1ST CONTROL UNIT 712
1ST CONT IF 722
LOC UNIT 720
LOC IF 732
1ST STO UNIT 714
1ST STO IF 724
1ST SW 726
COM PATH 104
1ST DEV TRANS 708
2ND DEV TRANS 710
2ND DEV 106
2ND USER I/F 738
2ND DISP I/F 740
2ND COM UNIT 736
2ND COM IF 750
2ND CONTROL UNIT 734
2ND CONT IF 744
2ND STO UNIT 746
2ND STO IF 748
2ND SW 742

FIG. 7

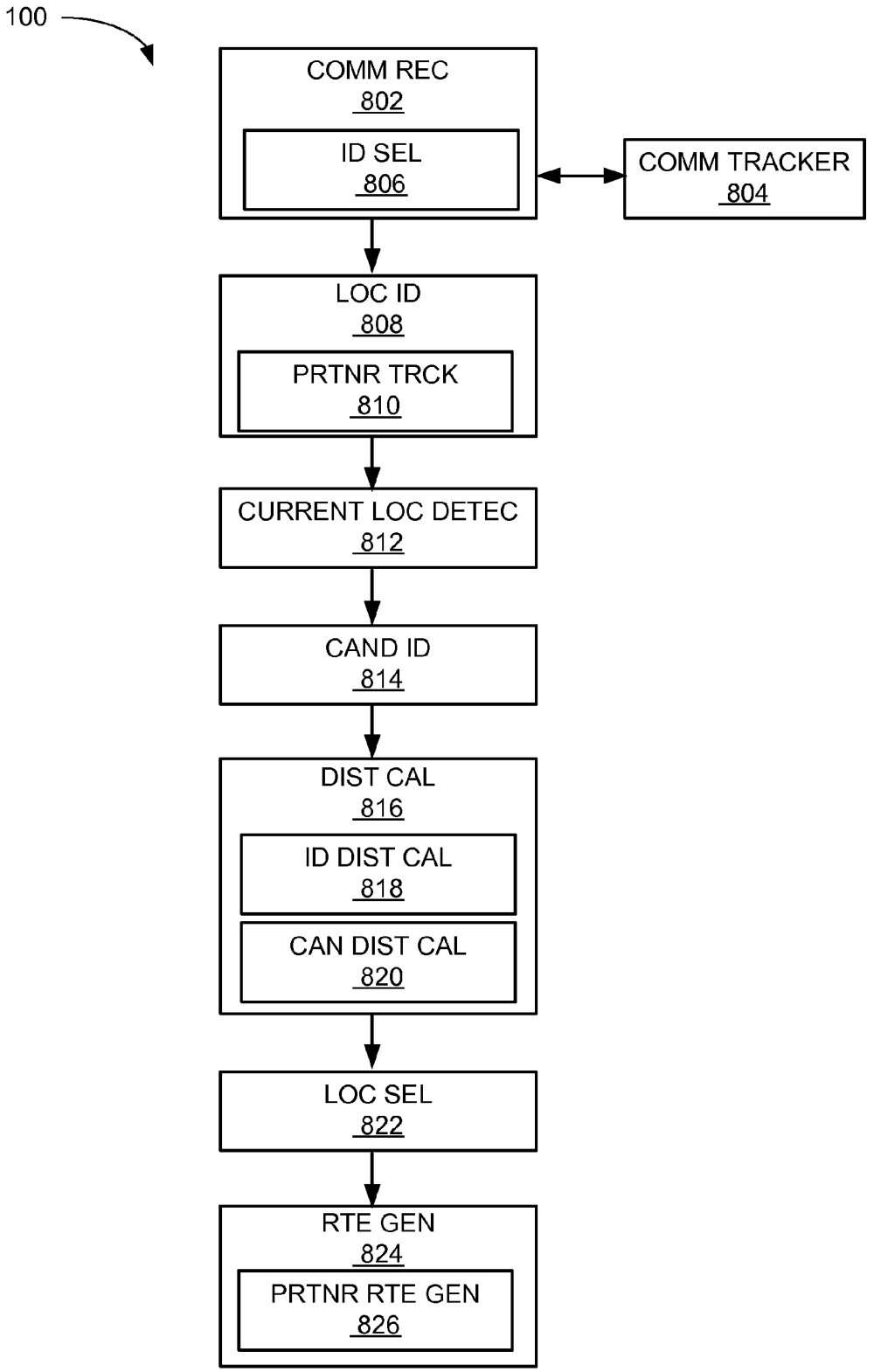

100
COMM REC
802
ID SEL
806
COMM TRACKER
804
LOC ID
808
PRTNR TRCK
810
CURRENT LOC DETEC
812
CAND ID
814
DIST CAL
816
ID DIST CAL
818
CAN DIST CAL
820
LOC SEL
822
RTE GEN
824
PRTNR RTE GEN
826

FIG. 8

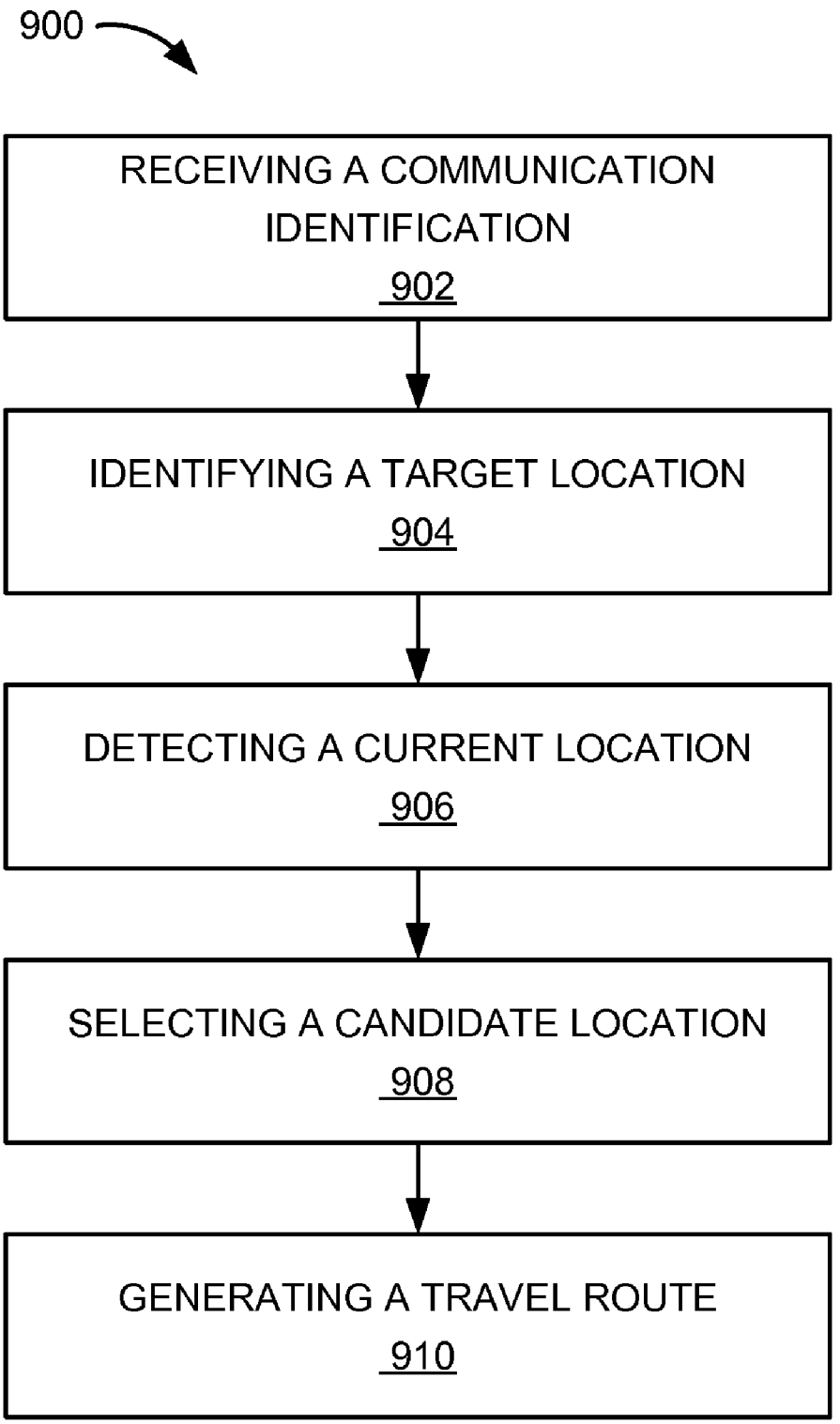

900
RECEIVING A COMMUNICATION IDENTIFICATION
902
IDENTIFYING A TARGET LOCATION
904
DETECTING A CURRENT LOCATION
906
SELECTING A CANDIDATE LOCATION
908
GENERATING A TRAVEL ROUTE
910

FIG. 9

NAVIGATION SYSTEM WITH COMMUNICATION IDENTIFICATION BASED DESTINATION GUIDANCE MECHANISM AND METHOD OF OPERATION THEREOF

TECHNICAL FIELD

[0001] The present invention relates generally to a navigation system, and more particularly to a system for communication identification based destination guidance mechanism.

BACKGROUND ART

[0002] Modern portable consumer and industrial electronics, especially client devices such as navigation systems, cellular phones, portable digital assistants, and combination devices, are providing increasing levels of functionality to support modern life including location-based information services. Research and development in the existing technologies can take a myriad of different directions.

[0003] As users become more empowered with the growth of mobile location based service devices, new and old paradigms begin to take advantage of this new device space. There are many technological solutions to take advantage of this new device location opportunity. One existing approach is to use location information to provide navigation services such as a global positioning system (GPS) for a car or on a mobile device such as a cell phone, portable navigation device (PND) or a personal digital assistant (PDA).

[0004] Location based services allow users to create, transfer, store, and/or consume information in order for users to create, transfer, store, and consume in the "real world". One such use of location based services is to efficiently transfer or route users to the desired destination or service.

[0005] Navigation systems and location based services enabled systems have been incorporated in automobiles, notebooks, handheld devices, and other portable products. Today, these systems aid users by incorporating available, real-time relevant information, such as maps, directions, local businesses, or other points of interest (POI). The real-time information provides invaluable relevant information.

[0006] However, guidance to the destination without considering the communication identification for generating the optimal destination has become a paramount concern for the consumer. Guidance to a destination not most optimal for the user by the navigation system decreases the benefit of using the tool.

[0007] Thus, a need still remains for a navigation system with communication identification based destination guidance mechanism to generate a route to a destination most optimal to the user. In view of the ever-increasing commercial competitive pressures, along with growing consumer expectations and the diminishing opportunities for meaningful product differentiation in the marketplace, it is increasingly critical that answers be found to these problems. In view of the ever-increasing commercial competitive pressures, along with growing consumer expectations and the diminishing opportunities for meaningful product differentiation in the marketplace, it is critical that answers be found for these problems. Additionally, the need to reduce costs, improve efficiencies and performance, and meet competitive pressures adds an even greater urgency to the critical necessity for finding answers to these problems.

[0008] Solutions to these problems have been long sought but prior developments have not taught or suggested any solutions and, thus, solutions to these problems have long eluded those skilled in the art.

DISCLOSURE OF THE INVENTION

[0009] The present invention provides a method of operation of a navigation system including: receiving a communication identification based on a communication; identifying a target location associated with the communication identification; detecting a current location associated with when the communication occurred for locating a device; selecting a candidate location based on the candidate location being closer to the current location than the target location where the candidate location is also associated with the communication identification; and generating a travel route to the candidate location for displaying on the device.

[0010] The present invention provides a navigation system, including: a communication receiver module for receiving a communication identification based on a communication; a location identifier module, coupled to the communication receiver module, for identifying a target location associated with the communication identification; a current location detector module, coupled to the location identifier module, for detecting a current location associated with when the communication occurred for locating a device; a location selector module, coupled to the current location detector module, for selecting a candidate location based on the candidate location being closer to the current location than the target location where the candidate location is also associated with the communication identification; and a route generator module, coupled to the location selector module, for generating a travel route to the candidate location for displaying on the device.

[0011] Certain embodiments of the invention have other steps or elements in addition to or in place of those mentioned above. The steps or elements will become apparent to those skilled in the art from a reading of the following detailed description when taken with reference to the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012] FIG. **1** is a navigation system with communication identification based destination guidance mechanism in an embodiment of the present invention.

[0013] FIG. **2** is an example of conducting a communication using the first device.

[0014] FIG. **3** is a first example of a display of a display interface for the first device.

[0015] FIG. **4** is a second example of a display of the display interface for the first device.

[0016] FIG. **5** is a third example of a display of the display interface for the first device.

[0017] FIG. **6** is a fourth example of a display of the display interface for the first device.

[0018] FIG. **7** is an exemplary block diagram of the navigation system.

[0019] FIG. **8** is a control flow of the navigation system.

[0020] FIG. **9** is a flow chart of a method of operation of the navigation system in a further embodiment of the present invention.

BEST MODE FOR CARRYING OUT THE INVENTION

[0021] The following embodiments are described in sufficient detail to enable those skilled in the art to make and use the invention. It is to be understood that other embodiments would be evident based on the present disclosure, and that system, process, or mechanical changes may be made without departing from the scope of the present invention.

[0022] In the following description, numerous specific details are given to provide a thorough understanding of the invention. However, it will be apparent that the invention may be practiced without these specific details. In order to avoid obscuring the present invention, some well-known circuits, system configurations, and process steps are not disclosed in detail.

[0023] The drawings showing embodiments of the system are semi-diagrammatic and not to scale and, particularly, some of the dimensions are for the clarity of presentation and are shown exaggerated in the drawing FIGs. Similarly, although the views in the drawings for ease of description generally show similar orientations, this depiction in the FIGs. is arbitrary for the most part. Generally, the invention can be operated in any orientation. The embodiments have been numbered first embodiment, second embodiment, etc. as a matter of descriptive convenience and are not intended to have any other significance or provide limitations for the present invention.

[0024] One skilled in the art would appreciate that the format with which navigation information is expressed is not critical to some embodiments of the invention. For example, in some embodiments, navigation information is presented in the format of (X, Y), where X and Y are two ordinates that define the geographic location, i.e., a position of a user.

[0025] In an alternative embodiment, navigation information is presented by longitude and latitude related information. In a further embodiment of the present invention, the navigation information also includes a velocity element including a speed component and a heading component.

[0026] The term "relevant information" referred to herein comprises the navigation information described as well as information relating to points of interest to the user, such as local business, hours of businesses, types of businesses, advertised specials, traffic information, maps, local events, and nearby community or personal information.

[0027] The term "module" referred to herein can include software, hardware, or a combination thereof For example, the software can be machine code, firmware, embedded code, and application software. Also for example, the hardware can be circuitry, processor, computer, integrated circuit, integrated circuit cores, a pressure sensor, an inertial sensor, a microelectromechanical system (MEMS), passive devices, or a combination thereof.

[0028] Referring now to FIG. **1**, therein is shown a navigation system **100** with communication identification based destination guidance mechanism in an embodiment of the present invention. The navigation system **100** includes a first device **102**, such as a client or a server, connected to a second device **106**, such as a client or server, with a communication path **104**, such as a wireless or wired network.

[0029] For example, the first device **102** can be of any of a variety of mobile devices, such as a cellular phone, personal digital assistant, a notebook computer, automotive telematic navigation system, or other multi-functional mobile communication or entertainment device. The first device **102** can be a standalone device, or can be incorporated with a vehicle, for example a car, truck, bus, or train. The first device **102** can couple to the communication path **104** to communicate with the second device **106**.

[0030] For illustrative purposes, the navigation system **100** is described with the first device **102** as a mobile computing device, although it is understood that the first device **102** can be different types of computing devices. For example, the first device **102** can also be a non-mobile computing device, such as a server, a server farm, or a desktop computer.

[0031] The second device **106** can be any of a variety of centralized or decentralized computing devices. For example, the second device **106** can be a computer, grid computing resources, a virtualized computer resource, cloud computing resource, routers, switches, peer-to-peer distributed computing devices, or a combination thereof

[0032] The second device **106** can be centralized in a single computer room, distributed across different rooms, distributed across different geographical locations, embedded within a telecommunications network. The second device **106** can have a means for coupling with the communication path **104** to communicate with the first device **102**. The second device **106** can also be a client type device as described for the first device **102**.

[0033] In another example, the first device **102** can be a particularized machine, such as a mainframe, a server, a cluster server, rack mounted server, or a blade server, or as more specific examples, an IBM System z10™ Business Class mainframe or a HP ProLiant ML™ server. Yet another example, the second device **106** can be a particularized machine, such as a portable computing device, a thin client, a notebook, a netbook, a smartphone, personal digital assistant, or a cellular phone, and as specific examples, an Apple iPhone™, Palm Centro™, or Moto Q Global™.

[0034] For illustrative purposes, the navigation system **100** is described with the second device **106** as a non-mobile computing device, although it is understood that the second device **106** can be different types of computing devices. For example, the second device **106** can also be a mobile computing device, such as notebook computer, another client device, or a different type of client device. The second device **106** can be a standalone device, or can be incorporated with a vehicle, for example a car, truck, bus, or train.

[0035] Also for illustrative purposes, the navigation system **100** is shown with the second device **106** and the first device **102** as end points of the communication path **104**, although it is understood that the navigation system **100** can have a different partition between the first device **102**, the second device **106**, and the communication path **104**. For example, the first device **102**, the second device **106**, or a combination thereof can also function as part of the communication path **104**.

[0036] The communication path **104** can be a variety of networks. For example, the communication path **104** can include wireless communication, wired communication, optical, ultrasonic, or the combination thereof. Satellite communication, cellular communication, Bluetooth, Infrared Data Association standard (IrDA), wireless fidelity (WiFi), and worldwide interoperability for microwave access

(WiMAX) are examples of wireless communication that can be included in the communication path **104**. Ethernet, digital subscriber line (DSL), fiber to the home (FTTH), and plain old telephone service (POTS) are examples of wired communication that can be included in the communication path **104**.

[0037] Further, the communication path **104** can traverse a number of network topologies and distances. For example, the communication path **104** can include direct connection, personal area network (PAN), local area network (LAN), metropolitan area network (MAN), wide area network (WAN) or any combination thereof

[0038] Referring now to FIG. **2**, therein is shown an example of conducting a communication **202** using the first device **102**. The communication **202** is defined as an activity of conveying information. For example, the communication **202** can include making a telephone call, sending an electronic mail **204**, or accessing a website.

[0039] The electronic mail **204** is defined as a system for sending or receiving messages from one individual to another via telecommunications links between computers or terminals. For example, the first device **102** can send or receive the electronic mail **204** to communicate with another individual utilizing a similar device to the first device **102**.

[0040] A communication identification **206** is defined as an identification of the party involved in the communication **202**. For example, a telephone number **208** can be the communication identification **206** for communicating via a telephone call. The telephone number **208** for the first device **102** can be "+1 (408) 888-8888." The first device **102** can receive a call from the telephone number **208** "+1 (408) 998-8170." For a further example, the communication **202** can occur when the user, the navigation system **100**, or a combination thereof accepts or makes the call.

[0041] For a different example, an electronic mail address **210** can be the communication identification **206** for communicating via the electronic mail **204**. The electronic mail address **210** for sending the electronic mail **204** from the first device **102** can be "john@doe.com." The first device **102** can receive the electronic mail **204** from the electronic mail address **210** "info@shop.com." For a further example, the communication **202** can occur when the user, the navigation system **100**, or a combination thereof downloads or sends the electronic mail **204**.

[0042] For another example, a website address **212** can be the communication identification **206** of a website. The first device **102** can access the website with the website address **212** "www.company.com." For a further example, the communication **202** can occur when the user, the navigation system **100**, or a combination thereof accesses the website address **212**.

[0043] Referring now to FIG. **3**, therein is shown a first example of a display of a display interface **302** for the first device **102**. A travel route **304** is defined as a path that the vehicle with the navigation system **100** can take to reach the target destination. The travel route **304** includes a current location **306**, a geographic location **308**, a target location **310**, a candidate location **312**, or a combination thereof

[0044] The current location **306** is defined as a physical location of the vehicle with the navigation system **100** when the communication **202** of FIG. **2** occurred. For example, if the navigation system **100** receives a call from the telephone number **208** "+1 (408) 945-9999" while traversing a highway, the current location **306** can represent the physical location where the navigation system **100** receives the call.

[0045] For a further example, the navigation system **100** can update the current location **306** while the communication **202** is still occurring. The physical location where the navigation system **100** made and ended the call can be different. The navigation system **100** can update the current location **306** to be the physical location where the call ended.

[0046] The geographic location **308** is defined as the physical location where the travel route **304** can guide the vehicle to reach. For example, the geographic location **308** can represent the address of the physical location, the latitude and longitude coordinates of the physical location, or a combination thereof.

[0047] The target location **310** is defined as the target destination associated with the communication identification **206**. For example, "+1 (408) 945-9999" can be the communication identification **206** for the restaurant called Sushi Maru™ in Milpitas, Calif. (CA). The target location **310** for the communication identification **206** of "+1 (408) 945-9999" can be Sushi Maru™ in Milpitas, Calif. For a further example, the target location **310** can be represented by the address of the physical location, the latitude and longitude coordinates of the physical location, or a combination thereof.

[0048] The candidate location **312** is defined as the destination that is not targeted by the user, the navigation system **100**, or a combination thereof but is also associated with the communication identification **206**. Continuing with the previous example, the communication identification **206** can be "+1 (408) 945-9999" and the target destination can be Sushi Maru™ in Milpitas, Calif.

[0049] The candidate location **312** can be Sushi Maru™ in San Jose, Calif. Although "+1 (408) 945-9999" is not the telephone number **208** for the Sushi Maru™ in San Jose, the Sushi Maru™ in San Jose is associated with "+1 (408) 945-9999," because the restaurant in Milpitas and San Jose are both "Sushi Maru" and are affiliated. For a further example, the candidate location **312** can be represented by the address of the physical location, the latitude and longitude coordinates of the physical location, or a combination thereof.

[0050] A target distance **314** is defined as the physical length from the location of the vehicle with the navigation system **100** to the target destination. For example, the target distance **314** between the current location **306** and the target location **310** can be 30 kilometers.

[0051] A candidate distance **318** is defined as the physical length from the location of the vehicle with the navigation system **100** to the destination not targeted by the user, the navigation system **100**, or a combination thereof. For example, the candidate distance **318** between the current location **306** and the candidate location **312** can be 10 kilometers.

[0052] A call log **316** is defined as a record of the communication **202** involving a telephone call. For example, the call log **316** can record recent calls, missed calls, or a combination thereof. For a further example, the call log **316** can record that the navigation system **100** received the telephone number **208** of "+1 (408) 945-9999" from Sushi Maru™ of Milpitas.

[0053] The example illustrated in FIG. **3** is as follows. A user of the navigation system **100** will be denoted as "user." The user can enter the telephone number **208** "+1 (408) 945-9999" from the call log **316** for recent calls into the navigation system **100** to generate the travel route **304**. The target location **310** can be Sushi Maru™ in Milpitas. The candidate location **312** can be Sushi Maru™ in San Jose.

[0054] The target distance **314** from the current location **306** to the target location **310** can be 30 kilometers. The candidate distance **318** from the current location **306** to the candidate location **312** can be 10 kilometers. Because the target distance **314** exceeds the candidate distance, the navigation system **100** can generate the travel route **304** to the candidate location **312** instead of to the target location **310**. The details regarding the navigation system **100** generating the travel route **304** will be discussed later.

[0055] Referring now to FIG. **4**, therein is shown a second example of a display of the display interface **302** for the first device **102**. An address book **402** is defined as an electronic storage medium where the communication identification **206**, such as the telephone number **208** of FIG. **2**, the electronic mail address **210**, the website address **212** of FIG. **2**, or a combination thereof, is stored. For example, the address book **402** can be stored within the first device **102**, the cloud computing, or a combination thereof.

[0056] The example illustrated in FIG. **4** is as follows. The user can enter the electronic mail address **210** from the address book **402** into the navigation system **100** to generate the travel route **304**. The target location **310** can be a store called Walmart™ in Milpitas. The current location **306** of the vehicle can be Milpitas. The navigation system **100** can consider another Walmart™ in San Jose as the candidate location **312**.

[0057] The target distance **314** from the current location **306** to the target location **310** can be 10 kilometers. The candidate distance **318** from the current location **306** to the candidate location **312** can be 30 kilometers. Since the target distance **314** is closer than the candidate distance **318**, the navigation system **100** can generate the travel route **304** to the target location **310** instead of the candidate location **312**. The details regarding the navigation system **100** generating the travel route **304** will be discussed later.

[0058] Referring now to FIG. **5**, therein is shown a third example of a display of the display interface **302** for the first device **102**. Destination candidates **502** are defined as candidates of the destination associated with the communication identification **206** of FIG. **2** that the navigation system **100** considers for selecting the candidate location **312**. For example, the destination candidates **502** for Walmart™ can include not only the Walmart™ in San Jose, but also in Oakland, Calif. and Sunnyvale, Calif.

[0059] A travel distance **504** is defined as the physical distance from the location of the vehicle with the navigation system **100** to each of the candidates of the destination. For example, The travel distance **504** for the destination candidates **502** representing Walmart™ in San Jose, Oakland, Sunnyvale can be 45 kilometers, 10 kilometers, and 25 kilometers respectively.

[0060] The example illustrated in FIG. **5** is as follows. The user can enter the website address **212** for Walmart™ into the navigation system **100**. The destination candidates **502** can include the Walmart™ in Oakland, San Jose, and Sunnyvale. The navigation system **100** can calculate the travel distance **504** from the current location **306** to each of the destination candidates **502**.

[0061] For example, the navigation system **100** can select one of the destination candidates **502** with the shortest of the travel distance **504** as the candidate location **312**. The candidate location **312** can be the Walmart™ in Oakland.

[0062] For this example, the target location **310** can be the Walmart™ in Milpitas. The target distance **314** from the current location **306** to the target location **310** can be 30 kilometers. The candidate distance **318** from the current location **306** to the candidate location **312** can be 10 kilometers. Since the target distance **314** exceeds the candidate distance **318**, the navigation system **100** can generate the travel route **304** to the candidate location **312** instead of the target location **310**. The details regarding the navigation system **100** generating the travel route **304** will be discussed later.

[0063] Referring now to FIG. **6**, therein is shown a fourth example of a display of the display interface **302** for the first device **102**. A partner travel route **602** is defined as a path taken by a party to the communication **202** with the user, the navigation system **100**, or a combination thereof. A partner location **604** is defined as the geographic location **308** of FIG. **2** of the party to the communication **202** with the user, the navigation system **100**, or a combination thereof. The party to the communication **202** can be stationary or mobile if the party is using a device such as a cellular phone.

[0064] The example illustrated in FIG. **6** is as follows. The call log **316** can record a missed call from a friend of the user. The missed call can be the telephone number **208** from a cellular phone. The user can enter the telephone number **208** into the navigation system **100**. The navigation system **100** can generate the partner travel route **602** by tracking the changes of the geographic location **308** of FIG. **3** of the partner location **604**. Furthermore, the navigation system **100** can generate the travel route **304** from the current location **306** by tracking the partner travel route **602** for the user. The vehicle can rendezvous with the party to the communication **202** by traversing the travel route **304** to reach the partner location **604**.

[0065] Referring now to FIG. **7**, therein is shown an exemplary block diagram of the navigation system **100**. The navigation system **100** can include the first device **102**, the communication path **104**, and the second device **106**. The first device **102** can send information in a first device transmission **708** over the communication path **104** to the second device **106**. The second device **106** can send information in a second device transmission **710** over the communication path **104** to the first device **102**.

[0066] For illustrative purposes, the navigation system **100** is shown with the first device **102** as a client device, although it is understood that the navigation system **100** can have the first device **102** as a different type of device. For example, the first device **102** can be a server.

[0067] Also for illustrative purposes, the navigation system **100** is shown with the second device **106** as a server, although it is understood that the navigation system **100** can have the second device **106** as a different type of device. For example, the second device **106** can be a client device.

[0068] For brevity of description in this embodiment of the present invention, the first device **102** will be described as a client device and the second device **106** will be described as a server device. The present invention is not limited to this selection for the type of devices. The selection is an example of the present invention.

[0069] The first device **102** can include a first control unit **712**, a first storage unit **714**, a first communication unit **716**, a first user interface **718**, and a location unit **720**. The first control unit **712** can include a first control interface **722**. The first control unit **712** can execute a first software **726** to provide the intelligence of the navigation system **100**. The first control unit **712** can be implemented in a number of different manners. For example, the first control unit **712** can

be a processor, an embedded processor, a microprocessor, a hardware control logic, a hardware finite state machine (FSM), a digital signal processor (DSP), or a combination thereof. The first control interface **722** can be used for communication between the first control unit **712** and other functional units in the first device **102**. The first control interface **722** can also be used for communication that is external to the first device **102**.

[0070] The first control interface **722** can receive information from the other functional units or from external sources, or can transmit information to the other functional units or to external destinations. The external sources and the external destinations refer to sources and destinations external to the first device **102**.

[0071] The first control interface **722** can be implemented in different ways and can include different implementations depending on which functional units or external units are being interfaced with the first control interface **722**. For example, the first control interface **722** can be implemented with a pressure sensor, an inertial sensor, a microelectromechanical system (MEMS), optical circuitry, waveguides, wireless circuitry, wireline circuitry, or a combination thereof

[0072] The location unit **720** can generate location information, current heading, and current speed of the first device **102**, as examples. The location unit **720** can be implemented in many ways. For example, the location unit **720** can function as at least a part of a global positioning system (GPS), an inertial navigation system, a cellular-tower location system, a pressure location system, or any combination thereof.

[0073] The location unit **720** can include a location interface **732**. The location interface **732** can be used for communication between the location unit **720** and other functional units in the first device **102**. The location interface **732** can also be used for communication that is external to the first device **102**.

[0074] The location interface **732** can receive information from the other functional units or from external sources, or can transmit information to the other functional units or to external destinations. The external sources and the external destinations refer to sources and destinations external to the first device **102**.

[0075] The location interface **732** can include different implementations depending on which functional units or external units are being interfaced with the location unit **720**. The location interface **732** can be implemented with technologies and techniques similar to the implementation of the first control interface **722**.

[0076] The first storage unit **714** can store the first software **726**. The first storage unit **714** can also store the relevant information, such as advertisements, points of interest (POI), navigation routing entries, or any combination thereof

[0077] The first storage unit **714** can be a volatile memory, a nonvolatile memory, an internal memory, an external memory, or a combination thereof. For example, the first storage unit **714** can be a nonvolatile storage such as nonvolatile random access memory (NVRAM), Flash memory, disk storage, or a volatile storage such as static random access memory (SRAM).

[0078] The first storage unit **714** can include a first storage interface **724**. The first storage interface **724** can be used for communication between the location unit **720** and other functional units in the first device **102**. The first storage interface **724** can also be used for communication that is external to the first device **102**.

[0079] The first storage interface **724** can receive information from the other functional units or from external sources, or can transmit information to the other functional units or to external destinations. The external sources and the external destinations refer to sources and destinations external to the first device **102**.

[0080] The first storage interface **724** can include different implementations depending on which functional units or external units are being interfaced with the first storage unit **714**. The first storage interface **724** can be implemented with technologies and techniques similar to the implementation of the first control interface **722**.

[0081] The first communication unit **716** can enable external communication to and from the first device **102**. For example, the first communication unit **716** can permit the first device **102** to communicate with the second device **106** of FIG. **1**, an attachment, such as a peripheral device or a computer desktop, and the communication path **104**.

[0082] The first communication unit **716** can also function as a communication hub allowing the first device **102** to function as part of the communication path **104** and not limited to be an end point or terminal unit to the communication path **104**. The first communication unit **716** can include active and passive components, such as microelectronics or an antenna, for interaction with the communication path **104**.

[0083] The first communication unit **716** can include a first communication interface **728**. The first communication interface **728** can be used for communication between the first communication unit **716** and other functional units in the first device **102**. The first communication interface **728** can receive information from the other functional units or can transmit information to the other functional units.

[0084] The first communication interface **728** can include different implementations depending on which functional units are being interfaced with the first communication unit **716**. The first communication interface **728** can be implemented with technologies and techniques similar to the implementation of the first control interface **722**.

[0085] The first user interface **718** allows a user (not shown) to interface and interact with the first device **102**. The first user interface **718** can include an input device and an output device. Examples of the input device of the first user interface **718** can include a keypad, a touchpad, soft-keys, a keyboard, a microphone, or any combination thereof to provide data and communication inputs.

[0086] The first user interface **718** can include a first display interface **730**. The first display interface **730** can include a display, a projector, a video screen, a speaker, or any combination thereof.

[0087] The first control unit **712** can operate the first user interface **718** to display information generated by the navigation system **100**. The first control unit **712** can also execute the first software **726** for the other functions of the navigation system **100**, including receiving location information from the location unit **720**. The first control unit **712** can further execute the first software **726** for interaction with the communication path **104** via the first communication unit **716**.

[0088] The second device **106** can be optimized for implementing the present invention in a multiple device embodiment with the first device **102**. The second device **106** can provide the additional or higher performance processing power compared to the first device **102**. The second device **106** can include a second control unit **734**, a second communication unit **736**, and a second user interface **738**.

[0089] The second user interface **738** allows a user (not shown) to interface and interact with the second device **106**. The second user interface **738** can include an input device and an output device. Examples of the input device of the second user interface **738** can include a keypad, a touchpad, soft-keys, a keyboard, a microphone, or any combination thereof to provide data and communication inputs. Examples of the output device of the second user interface **738** can include a second display interface **740**. The second display interface **740** can include a display, a projector, a video screen, a speaker, or any combination thereof.

[0090] The second control unit **734** can execute a second software **742** to provide the intelligence of the second device **106** of the navigation system **100**. The second software **742** can operate in conjunction with the first software **726**. The second control unit **734** can provide additional performance compared to the first control unit **712**.

[0091] The second control unit **734** can operate the second user interface **738** to display information. The second control unit **734** can also execute the second software **742** for the other functions of the navigation system **100**, including operating the second communication unit **736** to communicate with the first device **102** over the communication path **104**.

[0092] The second control unit **734** can be implemented in a number of different manners. For example, the second control unit **734** can be a processor, an embedded processor, a microprocessor, a hardware control logic, a hardware finite state machine (FSM), a digital signal processor (DSP), or a combination thereof.

[0093] The second control unit **734** can include a second controller interface **744**. The second controller interface **744** can be used for communication between the second control unit **734** and other functional units in the second device **106**. The second controller interface **744** can also be used for communication that is external to the second device **106**.

[0094] The second controller interface **744** can receive information from the other functional units or from external sources, or can transmit information to the other functional units or to external destinations. The external sources and the external destinations refer to sources and destinations external to the second device **106**.

[0095] The second controller interface **744** can be implemented in different ways and can include different implementations depending on which functional units or external units are being interfaced with the second controller interface **744**. For example, the second controller interface **744** can be implemented with a pressure sensor, an inertial sensor, a microelectromechanical system (MEMS), optical circuitry, waveguides, wireless circuitry, wireline circuitry, or a combination thereof.

[0096] A second storage unit **746** can store the second software **742**. The second storage unit **746** can also store the relevant information, such as advertisements, points of interest (POI), navigation routing entries, or any combination thereof. The second storage unit **746** can be sized to provide the additional storage capacity to supplement the first storage unit **714**.

[0097] For illustrative purposes, the second storage unit **746** is shown as a single element, although it is understood that the second storage unit **746** can be a distribution of storage elements. Also for illustrative purposes, the navigation system **100** is shown with the second storage unit **746** as a single hierarchy storage system, although it is understood that the navigation system **100** can have the second storage unit **746** in a different configuration. For example, the second storage unit **746** can be formed with different storage technologies forming a memory hierarchal system including different levels of caching, main memory, rotating media, or off-line storage.

[0098] The second storage unit **746** can be a volatile memory, a nonvolatile memory, an internal memory, an external memory, or a combination thereof. For example, the second storage unit **746** can be a nonvolatile storage such as non-volatile random access memory (NVRAM), Flash memory, disk storage, or a volatile storage such as static random access memory (SRAM).

[0099] The second storage unit **746** can include a second storage interface **748**. The second storage interface **748** can be used for communication between the location unit **720** and other functional units in the second device **106**. The second storage interface **748** can also be used for communication that is external to the second device **106**.

[0100] The second storage interface **748** can receive information from the other functional units or from external sources, or can transmit information to the other functional units or to external destinations. The external sources and the external destinations refer to sources and destinations external to the second device **106**.

[0101] The second storage interface **748** can include different implementations depending on which functional units or external units are being interfaced with the second storage unit **746**. The second storage interface **748** can be implemented with technologies and techniques similar to the implementation of the second controller interface **744**.

[0102] The second communication unit **736** can enable external communication to and from the second device **106**. For example, the second communication unit **736** can permit the second device **106** to communicate with the first device **102** over the communication path **104**.

[0103] The second communication unit **736** can also function as a communication hub allowing the second device **106** to function as part of the communication path **104** and not limited to be an end point or terminal unit to the communication path **104**. The second communication unit **736** can include active and passive components, such as microelectronics or an antenna, for interaction with the communication path **104**.

[0104] The second communication unit **736** can include a second communication interface **750**. The second communication interface **750** can be used for communication between the second communication unit **736** and other functional units in the second device **106**. The second communication interface **750** can receive information from the other functional units or can transmit information to the other functional units.

[0105] The second communication interface **750** can include different implementations depending on which functional units are being interfaced with the second communication unit **736**. The second communication interface **750** can be implemented with technologies and techniques similar to the implementation of the second controller interface **744**.

[0106] The first communication unit **716** can couple with the communication path **104** to send information to the second device **106** in the first device transmission **708**. The second device **106** can receive information in the second communication unit **736** from the first device transmission **708** of the communication path **104**.

[0107] The second communication unit **736** can couple with the communication path **104** to send information to the

first device **102** in the second device transmission **710**. The first device **102** can receive information in the first communication unit **716** from the second device transmission **710** of the communication path **104**. The navigation system **100** can be executed by the first control unit **712**, the second control unit **734**, or a combination thereof.

[0108] For illustrative purposes, the second device **106** is shown with the partition having the second user interface **738**, the second storage unit **746**, the second control unit **734**, and the second communication unit **736**, although it is understood that the second device **106** can have a different partition. For example, the second software **742** can be partitioned differently such that some or all of its function can be in the second control unit **734** and the second communication unit **736**. Also, the second device **106** can include other functional units not shown in FIG. **7** for clarity.

[0109] The functional units in the first device **102** can work individually and independently of the other functional units. The first device **102** can work individually and independently from the second device **106** and the communication path **104**.

[0110] The functional units in the second device **106** can work individually and independently of the other functional units. The second device **106** can work individually and independently from the first device **102** and the communication path **104**.

[0111] For illustrative purposes, the navigation system **100** is described by operation of the first device **102** and the second device **106**. It is understood that the first device **102** and the second device **106** can operate any of the modules and functions of the navigation system **100**. For example, the first device **102** is described to operate the location unit **720**, although it is understood that the second device **106** can also operate the location unit **720**.

[0112] Referring now to FIG. **8**, therein is shown a control flow of the navigation system **100**. The navigation system **100** can include a communication receiver module **802**. The communication receiver module **802** receives the identification involved in the communication **202** of FIG. **2**. For example, the communication receiver module **802** can receive the communication identification **206** of FIG. **2** based on the communication **202**.

[0113] The communication receiver module **802** can receive the communication identification **206** in a number of ways. For example, the user can enter the communication identification **206** into the communication receiver module **802** by manually typing in, selecting from a list, speaking a voice command, or a combination thereof the telephone number **208** of FIG. **2**, the electronic mail address **210** of FIG. **2**, the website address **212** of FIG. **2**, or a combination thereof. As a different example, the communication receiver module **802** can receive the telephone number **208** from the telephone call, the electronic mail address **210** from the electronic mail **204** of FIG. **2**, the website address **212** from the internet access, or a combination thereof via the first control interface **722** of FIG. **7**.

[0114] The navigation system **100** can include a communication tracker module **804**. The communication tracker module **804** tracks the identification involved in the communication **202**. For example, the communication tracker module **804** can track the communication identification **206** based on the communication **202**. For a further example, the communication tracker module **804** can generate the call log **316** of FIG. **3**, the address book **402** of FIG. **4**, or a combination thereof.

[0115] The communication tracker module **804** can track the communication identification **206** in a number of ways. For example, the communication tracker module **804** can generate the call log **316** by categorizing the telephone number **208** as the recent calls received by the first device **102** of FIG. **1**. Additionally, the communication tracker module **804** can generate the call log **316** by categorizing the telephone number **208** that the user had failed to respond as missed calls. The communication tracker module **804** can store the call log **316** in the first storage unit **714** of FIG. **7**, the second storage unit **746** of FIG. **7**, or a combination thereof.

[0116] For a different example, the communication tracker module **804** can generate the address book **402** by categorizing the address book **402** according to the telephone number **208**, the electronic mail address **210**, the website address **212** received by the communication tracker module **804**. For a more specific example, the address book **402** can categorize the electronic mail address **210** by names alphabetically. Additionally, the address book **402** can categorize the website address **212** accessed by the navigation system **100** by the number of visits to the website.

[0117] For illustrative purposes, the navigation system **100** is shown with the communication receiver module **802** receiving the communication identification **206** from the user, the external sources, or a combination thereof, although it is understood that the navigation system **100** can operate the communication receiver module **802** differently. For example, the communication receiver module **802** can select the communication identification **206** from the call log **316**, the address book **402**, or a combination thereof.

[0118] The communication receiver module **802** can select the communication identification **206** in a number of ways. For example, the communication receiver module **802** includes an identification selector module **806**. The identification selector module **806** selects the communication identification **206**.

[0119] The identification selector module **806** can select the communication identification **206** in a number of ways. For example, the identification selector module **806** can select the telephone number **208** from the call log **316**, the address book **402**, or a combination thereof. For a more specific example, the identification selector module **806** can select "+1 (408) 945-9999" from the call log **316** representing recent calls as illustrated in FIG. **3**.

[0120] For another example, the user, the navigation system **100**, or a combination thereof can enter a name of a person "Joe Smith" in to the communication receiver module **802**. The identification selector module **806** can select the telephone number **208** for "Joe Smith" from the address book **402** that matches the entry to the communication receiver module **802**.

[0121] For a different example, the identification selector module **806** can select the electronic mail address **210** from the electronic mail **204**, the address book **402**, or a combination thereof. For a specific example, the identification selector module **806** can select the electronic mail address **210** from the address book **402** similarly to the identification selector module **806** selecting the telephone number **208** from the address book **402**.

[0122] For a different example, the identification selector module **806** can select the website address **212**. For a more specific example, the identification selector module **806** can select the website address **212** from the address book **402**

similarly to the identification selector module **806** selecting the telephone number **208** from the address book **402**.

[0123] The navigation system **100** can include a location identifier module **808**. The location identifier module **808** identifies the physical location associated with the communication identification **206**. For example, the location identifier module **808** can identify the target location **310** of FIG. **3** associated with the communication identification **206**.

[0124] The location identifier module **808** can identify the target location **310** in a number of ways. For example, the location identifier module **808** can search the public and private directory based on the communication identification **206** via the first control interface **722** to identify the target location **310**.

[0125] For a further example, the communication identification **206** can be "+1 (408) 945-9999." The location identifier module **808** can search the telephone number **208** at public rating websites, such as Yelp.com™, to identify that the target location **310** associated with the telephone number **208** is "Sushi Maru" in Milpitas.

[0126] For another example, the location identifier module **808** can search the telephone number **208** in the address book **402**. The address book **402** can include the physical address associated with the telephone number **208**.

[0127] For illustrative purposes, the navigation system **100** is shown with the location identifier module **808** identifying the target location **310**, although it is understood that the navigation system **100** can operate the location identifier module **808** differently. For example, the location identifier module **808** can identify the partner location **604** of FIG. **6** associated with the communication identification **206**.

[0128] The location identifier module **808** can identify the partner location **604** in a number of ways. The location identifier module **808** includes a partner tracker module **810**. The partner tracker module **810** tracks the geographic location **308** of FIG. **3** of the party that the user is communicating with. For example, the partner tracker module **810** can track the partner location **604**.

[0129] As illustrated in FIG. **6**, the party involved in the communication **202** with the user can be using a cellular phone equipped with GPS. The cellular phone can be equipped with a GPS tracking service to track the geographic location **308** for that cellular phone. The partner tracker module **810** can identify the partner location **604** associated with the communication identification **206** for that party by utilizing the GPS tracking service.

[0130] Additionally, using the GPS tracking service, the partner tracker module **810** can track the partner location **604** associated with the communication **202**. The party involved in the communication **202** can change the geographic location **308**, because the party can be driving a vehicle. The partner tracker module **810** can track the changes of the partner location **604** by utilizing the GPS tracking service to detect the changes in the partner location **604** of the party.

[0131] The navigation system **100** can include a current location detector module **812**. The current location detector module **812** detects the physical location of the user when the user is making or made the communication **202**. For example, the current location detector module **812** can detect the current location **306** of FIG. **3** associated with when the communication **202** occurred for locating the first device **102** of FIG. **1**.

[0132] The current location detector module **812** can detect the current location **306** in a number of ways. For example, the current location detector module **812** can detect when the communication **202** occurred via the first communication unit **716** of FIG. **7**. When the first communication unit **716** is activated to transmit the communication **202**, the location unit **720** of FIG. **7** can detect the current location **306** of the user. More specifically, the location unit **720** can detect the current location **306** when the communication **202** started via the first communication unit **716**. Furthermore, the location unit **720** can update the current location **306** when the communication **202** ended by detecting that the first communication unit **716** ended the communication **202**.

[0133] The navigation system **100** can include a candidate identifier module **814**. The candidate identifier module **814** identifies whether there are additional locations associated with the communication identification **206** other than the target location **310**. For example, the candidate identifier module **814** can identify one or more of the destination candidates **502** of FIG. **5** associated with the communication identification **206**.

[0134] The candidate identifier module **814** can identify the destination candidates **502** in a number of ways. For example, the candidate identifier module **814** can identify one or more of the destination candidates **502** associated with the telephone number **208**. For a more specific example, the communication identification **206** can be "+1 (408) 945-9999" for Sushi Maru™ in Milpitas. The candidate identifier module **814** can search a public directory, such as Yelp.com™, and identify that there is another Sushi Maru™ in San Jose. The candidate identifier module **814** can identify Sushi Maru™ in San Jose as one of the destination candidates **502** associated with the telephone number **208** "+1 (408) 945-9999."

[0135] For a different example, the candidate identifier module **814** can identify one or more of the destination candidates **502** associated with the electronic mail address **210**, the website address **212**, or a combination thereof. For a more specific example, the communication identification **206** can be "info@walmart.com" for Walmart™. Based on the electronic mail address **210**, the candidate identifier module **814** can search the website address **212** "www.walmart.com" and identify multiple store locations for Walmart™. The candidate identifier module **814** can identify the multiple store locations for Walmart™ as the destination candidates **502**.

[0136] The navigation system **100** can include a distance calculator module **816**. The distance calculator module **816** calculates the physical distance from one location to another. For example, the distance calculator module **816** can calculate the target distance **314** from the current location **306** to the target location **310**.

[0137] The distance calculator module **816** can calculate the target distance **314** in a number of ways. For example, the distance calculator module **816** includes an identified distance calculator module **818**. The identified distance calculator module **818** calculates the target distance **314** from the current location **306** to the target location **310**. For a more specific example, the identified distance calculator module **818** can calculate the target distance **314** by calculating the physical distance from the GPS coordinates of the current location **306** to the GPS coordinates of the target location **310**. The identified distance calculator module **818** can also calculate the target distance **314** based on the physical length of the route between the current location **306** and the target location **310**.

[0138] For another example, the distance calculator module **816** can include a candidate distance calculator module **820**.

The candidate distance calculator module **820** calculates the target distance **314** from the current location **306** to each of the destination candidates **502**. The candidate distance calculator module **820** also calculates the target distance **314** from the current location **306** to the candidate location **312**.

[0139] For a more specific example, as illustrated in FIG. **5**, the destination candidates **502** for Walmart™ can be Oakland, San Jose, and Sunnyvale. The candidate distance calculator module **820** can calculate the travel distance **504** of FIG. **5** by calculating the physical distance from the GPS coordinates of the current location **306** to the GPS coordinates for each of the destination candidates **502** or calculating the physical distance of the route between the current location **306** and each of the destination candidates **502**. The candidate distance calculator module **820** can calculate the candidate distance **318** for the candidate location **312** similarly.

[0140] The navigation system **100** can include a location selector module **822**. The location selector module **822** selects the destination where the user will reach at the end of the travel. For example, the location selector module **822** can select the candidate location **312** based on the target distance **314** closer to the current location **306** than the target location **310** where the candidate location **312** is also associated with the communication identification **206**.

[0141] The location selector module **822** can select in a number of ways. For example, the location selector module **822** can select one of the destination candidates **502** as the candidate location **312** based on the travel distance **504** closest to the current location **306**. For a specific example, as illustrated in FIG. **5**, the location selector module **822** can select the Walmart™ in Oakland as the candidate location **312**, because it is the closest from the current location **306**. Subsequently, the travel distance **504** to reach the Walmart™ in Oakland will be the candidate distance **318**.

[0142] As a different example, the location selector module **822** can select the candidate location **312** over the target location **310** when the target distance **314** exceeds the candidate distance **318** otherwise the target location **310** is selected. As illustrated in FIG. **3**, the location selector module **822** can select the candidate location **312** representing Sushi Maru™ in San Jose, because the candidate location **312** is closer than the target location **310** representing Sushi Maru™ in Milpitas from the current location **306**.

[0143] The navigation system **100** can include a route generator module **824**. The route generator module **824** generates the path to the final destination for the user. For example, the route generator module **824** can generate the travel route **304** to the candidate location **312** for displaying on the first device **102**.

[0144] The route generator module **824** can generate the travel route **304** in a number of ways. For example, the route generator module **824** can generate the travel route **304** to the target location **310** when the target location **310** is closer than the candidate location **312** from the current location **306**. In contrast, if the candidate location **312** is closer, the route generator module **824** can generate the travel route **304** to the candidate location **312**. For another example, the route generator module **824** can generate the travel route **304** to the partner location similarly to the route generator module **824** generating the travel route **304** to the target location **310**.

[0145] The route generator module **824** can include a partner route generator module **826**. The partner route generator module **826** generates the path that the party to the communication **202** had taken by tracking the changes of the geographic location **308** of that party. For example, the partner route generator module **826** can generate the partner travel route **602** of FIG. **6** based on the partner location **604** being non-stationary.

[0146] For a specific example, the partner route generator module **826** can track the partner location **604** using the GPS tracking service while the communication **202** between the user and the party is occurring. The partner route generator module **826** can track each changes of the geographic location **308** of the party to generate the partner travel route **602**. Additionally, the partner route generator module **826** can track the partner location **604** even after the communication **202** between the user and the party had ended by utilizing the GPS tracking services to track the party's cellular phone. The duration of tracking the changes of the geographic location **308** of the partner location **604** can be predetermined by a set time frame or indefinitely.

[0147] For illustrative purposes, the navigation system **100** is shown with the route generator module **824** generating the travel route **304** to the candidate location **312**, although it is understood that the navigation system **100** can operate the route generator module **824** differently. For example, the route generator module **824** can generate the travel route **304** based on tracking the partner travel route **602** for rendezvousing at the partner location **604**.

[0148] For a specific example, the route generator module **824** can generate the travel route **304** by patterning the travel route **304** based on the partner travel route **602**. As illustrated in FIG. **6**, some portion of the travel route **304** may not overlap with the partner travel route **602**. However, some portion of the travel route **304** can overlap with the partner travel route **602**. The route generator module **824** can generate the travel route **304** that will traverse along the partner travel route **602** until the user can rendezvous with the party at the partner location **604**.

[0149] The physical transformation from displaying the travel route **304** result in movement in the physical world, such as people using the first device **102**, the vehicle, or a combination thereof, based on the operation of the navigation system **100**. As the movement in the physical world occurs, the movement itself creates additional information that is converted back to the destination candidates **502** and the candidate location **312** for the continued operation of the navigation system **100** and to continue the movement in the physical world.

[0150] The first software **726** of FIG. **7** of the first device **102** of FIG. **7** can include the navigation system **100**. For example, the first software **726** can include the communication receiver module **802**, the communication tracker module **804**, the location identifier module **808**, and the current location detector module **812**. The first software **726** can also include the candidate identifier module **814**, the distance calculator module **816**, the location selector module **822**, and the route generator module **824**.

[0151] The first control unit **712** of FIG. **7** can execute the first software **726** for the communication receiver module **802** to receive the communication identification **206**. The first control unit **712** can execute the first software **726** for the communication tracker module **804** to generate the call log **316**, the address book **402**, or a combination thereof. The first control unit **712** can execute the first software **726** for the location identifier module **808** to identify the target location

310. The first control unit **712** can execute the first software **726** for the current location detector module **812** to detect the current location **306**.

[0152] The first control unit **712** can execute the first software **726** for the candidate identifier module **814** to identify the destination candidates **502**. The first control unit **712** can execute the first software **726** for the distance calculator module **816** to calculate the target distance **314**. The first control unit **712** can execute the first software **726** for the location selector module **822** to select the target location **310** or the candidate location **312**.

[0153] The first control unit **712** can execute the first software **726** for the route generator module **824** to generate the travel route **304**. The first control unit **712** can execute the first display interface **730** of FIG. **7** to display the travel route **304**.

[0154] The second software **742** of FIG. **7** of the second device **106** of FIG. **7** can include the navigation system **100**. For example, the second software **742** can include the communication receiver module **802**, the communication tracker module **804**, the location identifier module **808**, and the current location detector module **812**. The second software **742** can also include the candidate identifier module **814**, the distance calculator module **816**, the location selector module **822**, and the route generator module **824**.

[0155] The second control unit **734** of FIG. **7** can execute the second software **742** for the communication receiver module **802** to receive the communication identification **206**. The second control unit **734** can execute the second software **742** for the communication tracker module **804** to generate the call log **316**, the address book **402**, or a combination thereof. The second control unit **734** can execute the second software **742** for the location identifier module **808** to identify the target location **310**. The second control unit **734** can execute the second software **742** for the current location detector module **812** to detect the current location **306**.

[0156] The second control unit **734** can execute the second software **742** for the candidate identifier module **814** to identify the destination candidates **502**. The second control unit **734** can execute the second software **742** for the distance calculator module **816** to calculate the target distance **314**. The second control unit **734** can execute the second software **742** for the location selector module **822** to select the target location **310** or the candidate location **312**.

[0157] The second control unit **734** can execute the second software **742** for the route generator module **824** to generate the travel route **304**. The second control unit **734** can execute the second display interface **740** of FIG. **7** for displaying the travel route **304**.

[0158] The navigation system **100** can be partitioned between the first software **726** and the second software **742**. For example, the second software **742** can include the location identifier module **808**, the current location detector module **812**, the candidate identifier module **814**, the distance calculator module **816**, the location selector module **822**, and the route generator module **824**. The second control unit **734** can execute modules partitioned on the second software **742** as previously described.

[0159] The first software **726** can include the communication receiver module **802** and the communication tracker module **804**. Based on the size of the first storage unit **714**, the first software **726** can include additional modules of the navigation system **100**. The first control unit **712** can execute the modules partitioned on the first software **726** as previously described.

[0160] The first user interface **718** of FIG. **7** can receive an entry by the user for the communication identification **206**. The first control unit **712** can operate the first communication unit **716** to send the communication identification **206** to the second device **106**. The first control unit **712** can operate the first software **726** to operate the location unit **720**.

[0161] The second communication unit **736** of FIG. **7** can send the travel route **304** to the first device **102** through the communication path **104** of FIG. **7**. The travel route **304** can be displayed on the first display interface **730** and the second device **106**.

[0162] It has been discovered that the present invention provides the navigation system **100** for providing a safe operation of the navigation system **100** and other user interface system within a vehicle. By generating the travel route **304** to the candidate location **312** closer to the current location **306** instead of the target location **310**, the navigation system **100** can decrease the exposure of harm for operating the vehicle. Additionally, by allowing the user to only enter the communication identification **206** for generating the travel route **304** to the geographic location **308** that is most optimal for the user can aid the user of safer operation of the vehicle.

[0163] The navigation system **100** describes the module functions or order as an example. The modules can be partitioned differently. For example, the communication receiver module **802** and the communication tracker module **804** can be combined. Each of the modules can operate individually and independently of the other modules.

[0164] Furthermore, data generated in one module can be used by another module without being directly coupled to each other. The distance calculator module **816** can receive the current location **306** from the current location detector module **812**.

[0165] Referring now to FIG. **9**, therein is shown a flow chart of a method **900** of operation of the navigation system **100** in a further embodiment of the present invention. The method **900** includes: receiving a communication identification based on a communication in a block **902**; identifying a target location associated with the communication identification in a block **904**; detecting a current location associated with when the communication occurred for locating a device in a block **906**; selecting a candidate location based on the candidate location being closer to the current location than the target location where the candidate location is also associated with the communication identification in a block **908**; and generating a travel route to the candidate location for displaying on the device in a block **910**.

[0166] The resulting method, process, apparatus, device, product, and/or system is straightforward, cost-effective, uncomplicated, highly versatile, accurate, sensitive, and effective, and can be implemented by adapting known components for ready, efficient, and economical manufacturing, application, and utilization. Another important aspect of the present invention is that it valuably supports and services the historical trend of reducing costs, simplifying systems, and increasing performance. These and other valuable aspects of the present invention consequently further the state of the technology to at least the next level.

[0167] While the invention has been described in conjunction with a specific best mode, it is to be understood that many alternatives, modifications, and variations will be apparent to those skilled in the art in light of the aforegoing description. Accordingly, it is intended to embrace all such alternatives, modifications, and variations that fall within the scope of the

included claims. All matters hithertofore set forth herein or shown in the accompanying drawings are to be interpreted in an illustrative and non-limiting sense.

What is claimed is:

1. A method of operation of a navigation system comprising:
- receiving a communication identification based on a communication;
- identifying a target location associated with the communication identification;
- detecting a current location associated with when the communication occurred for locating a device;
- selecting a candidate location based on the candidate location being closer to the current location than the target location where the candidate location is also associated with the communication identification; and
- generating a travel route to the candidate location for displaying on the device.

2. The method as claimed in claim **1** further comprising:
- tracking a partner location for identifying a geographic location associated with the communication identification;
- generating a partner travel route based on the partner location being non-stationary; and
- wherein:
- generating the travel route includes generating the travel route based on tracking the partner travel route for rendezvousing at the partner location.

3. The method as claimed in claim **1** wherein selecting the candidate location includes:
- calculating a target distance from the current location to the target location;
- calculating a candidate distance from the current location to the candidate location; and
- selecting the candidate location over the target location when the target distance exceeds the candidate distance otherwise the target location is selected.

4. The method as claimed in claim **1** wherein generating the travel route includes generating the travel route to the target location when the target location is closer than the candidate location from the current location.

5. The method as claimed in claim **1** wherein selecting the candidate location includes:
- identifying one or more destination candidates associated with the communication identification;
- calculating a travel distance from the current location to each of the destination candidates; and
- selecting one of the destination candidates as the candidate location based on the travel distance closest to the current location.

6. A method of operation of a navigation system comprising:
- receiving a communication identification based on a communication;
- identifying a target location associated with the communication identification;
- detecting a current location associated with when the communication occurred for locating a device;
- calculating a target distance from the current location to the target location;
- calculating a candidate distance from the current location to the candidate location where the candidate location is also associated with the communication identification;
- selecting the candidate location over the target location based on the target distance exceeding the candidate distance otherwise the target location is selected; and
- generating a travel route to the candidate location for displaying on the device.

7. The method as claimed in claim **6** wherein:
- receiving the communication identification includes:
  - generating a call log, an address book, or a combination thereof,
  - selecting a telephone number from the call log, the address book, or a combination thereof, and
- selecting the candidate location includes:
  - identifying one or more destination candidates associated with the telephone number,
  - calculating a travel distance from the current location to each of the destination candidates, and
  - selecting one of the destination candidates as the candidate location based on the travel distance closest to the current location.

8. The method as claimed in claim **6** wherein:
- receiving the communication identification includes selecting an electronic mail address from an electronic mail, an address book, or a combination thereof; and
- selecting the candidate location includes:
  - identifying one or more destination candidates associated with the electronic mail address,
  - calculating a travel distance from the current location to each of the destination candidates, and
  - selecting one of the destination candidates as the candidate location based on the travel distance closest to the current location.

9. The method as claimed in claim **6** wherein:
- receiving the communication identification includes selecting a website address; and
- selecting the candidate location includes:
  - identifying one or more destination candidates associated with the website address,
  - calculating a travel distance from the current location to each of the destination candidates, and
  - selecting one of the destination candidates as the candidate location based on the travel distance closest to the current location.

10. The method as claimed in claim **6** wherein:
- identifying the target location includes identifying a partner location associated with the communication identification; and
- generating the travel route includes generating the travel route to the partner location.

11. A navigation system comprising:
- a communication receiver module for receiving a communication identification based on a communication;
- a location identifier module, coupled to the communication receiver module, for identifying a target location associated with the communication identification;
- a current location detector module, coupled to the location identifier module, for detecting a current location associated with when the communication occurred for locating a device;
- a location selector module, coupled to the current location detector module, for selecting a candidate location based on the candidate location being closer to the current location than the target location where the candidate location is also associated with the communication identification; and

a route generator module, coupled to the location selector module, for generating a travel route to the candidate location for displaying on the device.

12. The system as claimed in claim **11** further comprising:

a partner tracker module, coupled to the communication receiver module, for tracking a partner location for identifying a geographic location associated with the communication identification;

a partner route generator module, coupled to the location selector module, for generating a partner travel route based on the partner location being not stationary; and

wherein:

the route generator module is for generating the travel route based on tracking the partner travel route for rendezvousing at the partner location.

13. The system as claimed in claim **11** further comprising:

an identified distance calculator module, coupled to the current location detector module, for calculating a target distance from the current location to the target location;

a candidate distance calculator module, coupled to the current location detector module, for calculating a candidate distance from the current location to the candidate location; and

wherein:

the location selector module is for selecting the candidate location over the target location when the target distance exceeds the candidate distance otherwise the target location is selected.

14. The system as claimed in claim **11** wherein the route generator module is for generating the travel route to the target location when the target location is closer than the candidate location from the current location.

15. The system as claimed in claim **11** further comprising:

a candidate identifier module, coupled to the current location detector module, for identifying one or more destination candidates associated with the communication identification;

a distance calculator module, coupled to the candidate identifier module, for calculating a travel distance from the current location to each of the destination candidates; and

wherein:

the location selector module is for selecting one of the destination candidates as the candidate location based on the travel distance closest to the current location.

16. The system as claimed in claim **11** further comprising:

an identified distance calculator module, coupled to the communication receiver module, for calculating a target distance from the current location to the target location; and

a candidate distance calculator module, coupled to the communication receiver module, for calculating the candidate distance from the current location to the candidate location where the candidate location is also associated with the communication identification.

17. The system as claimed in claim **16** further comprising:

a communication tracker module, coupled to the communication receiver module, for generating a call log, an address book, or a combination thereof;

an identification selector module, coupled to the communication tracker module, for selecting a telephone number from the call log, the address book, or a combination thereof;

a candidate identifier module, coupled to the location identifier module, for identifying one or more destination candidates associated with the telephone number; and

wherein:

the candidate distance calculator module is for calculating a travel distance from the current location to each of the destination candidates; and

the location selector module is for selecting one of the destination candidates as the candidate location based on the travel distance closest to the current location.

18. The system as claimed in claim **16** further comprising:

an identification selector module, coupled to the communication tracker module, for selecting an electronic mail address from an electronic mail, an address book, or a combination thereof;

a candidate identifier module, coupled to the location identifier module, for identifying one or more destination candidates associated with the electronic mail address; and

wherein:

the candidate distance calculator module is for calculating a travel distance from the current location to each of the destination candidates; and

the location selector module is for selecting one of the destination candidates as the candidate location based on the travel distance closest to the current location.

19. The system as claimed in claim **16** wherein:

an identification selector module, coupled to the communication tracker module, for selecting a website address;

a candidate identifier module, coupled to the location identifier module, for identifying one or more destination candidates associated with the website address; and

wherein:

the candidate distance calculator module is for calculating a travel distance from the current location to each of the destination candidates; and

the location selector module is for selecting one of the destination candidates as the candidate location based on the travel distance closest to the current location.

20. The system as claimed in claim **16** further comprising:

a partner tracker module, coupled to the communication receiver module, for identifying a partner location associated with the communication identification; and

wherein:

the route generator module is for generating the travel route to the partner location.

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